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VOLUME XXIX APRIL, 1930 NUMBER 4

PAN EUROPE*

SAMUEL VAN VALKENBURG
College of the City of Detroit

THE GOLDEN AGE OF EUROPE

A few months ago a distinguished Scotch gentleman, Ramsay MacDonald, Prime Minister of Great Britain, in a speech at a dinner given to him by the Council of Foreign Affairs in New York, mentioned the fact that bye-and-bye the nations of the world would prefer the risk of peace above the risk of war. If I use that same line of thought, my aim tonight is to discuss why the European countries gradually will prefer the risk of cooperation above the risk of tariff protection. In order to understand that attitude we have to go back to the century before the war. During the 19th century Europe, and especially Western Europe, grew from a self-supporting agricultural continent into one of manufacturing industries, exporting the finished products and importing the raw material and the food it lacked. It was the golden age of Europe. Its population increased manifold. The Western European countries expanded into Africa, Asia and South America, exploring those continents and providing capital to make them sources of raw material and food. Colonial empires covered the world and European vessels sailed towards the most remote corners of the earth to exchange the raw products of those countries for the finished ones of Europe. Europe was prosperous. The standard of living was raised. Salaries were high enough to provide an income with adequate buying power, and Europe developed a kind of superiority complex, finding itself the greatest continent in the world and looking down upon others. That was the glory point of its existence. European money was an essential factor for the development of the world. European products could be found in the small villages of every continent and its economic domination seemed to be the base for the world's development.

* An address given on the occasion of the Annual Dinner of the National Council of Geography Teachers, Columbus, Ohio, December 28, 1929.

Even the economic rise of the United States in the second part of the 19th century did not disturb the European's peace of mind. This sensational rise, based on geographic factors, gave Europe greater vitality thru rivalry instead of depressing it and did much to encourage its energy, altho in some products, like coal and steel, the United States had already become Europe's foremost competitor.

THE ECONOMIC BREAKDOWN OF POST-WAR EUROPE

Then came the war. During the war Europe fought. Its factories were changed in order to produce the necessary war material. Its soil had to be neglected because capital and labor were otherwise engaged. In many ways an agricultural adjustment had to be made in order to produce the food products essential to the strength of the nation. The material used during these four years without being renewed became worn down and could not be replaced.

But these were not the main factors disturbing Europe's economic world position. With the rest of the world cut off from it, Europe as a market had suddenly ceased to exist, and the world looked elsewhere for the products that were missing. Many countries rose to that occasion and had the opportunity of developing their manufacturing industries far above their normal pre-war development. In the Far East Japan rose to a country of great economic importance, and during the war all along the Far East Japanese products replaced the former European ones. But the main gainer was the United States. With its wonderful geographical background, helped by its large population and its splendid modern standardized production, it took over Europe's economic position and became the world's economic leader.

Europe did not discover that change immediately. It fought for its existence and dreamed about pre-war prosperity which would come back if once the war was ended. But, when the war was over and Europe had time to look over the economic situation, it faced a different world. It faced a lost market and had to start all over again, and now, not as in the 19th century with itself as the only producer but against the sharp competition of many other countries, especially of the United States. And in many ways it looked for a long time as if Europe could not do it. The great deception that the golden age did not come back was, perhaps, one of the

main reasons why exhausted Europe could not immediately find the energy to start working and fighting for its economic existence. War spirit and political disorder, mutual jealousies and enmities, the severe restrictions of peace treaties, the war debt, the lack of capital to restore the manufacturing industries and to fertilize the soil, the great agrarian reform of Eastern Europe, the great difficulty for several changed, enlarged or revived countries to adjust their economic position—all these factors threatened to prevent the rebuilding of economic Europe. Bankruptcy was near and it seemed in the years 1920-1922 that old Europe had ceased to exist, and for the many of us who still considered Europe an essential factor in the world, those were sad years.

The United States of America had taken over Europe's former position as world leader; it became the world's financial and economic center; it even took over Europe's former superiority complex and considered Europe as an interesting region for summer trips, with many sentimental and historical attractions, but no more as a strong economic competitor.

Rise of Separatist Movements

These years 1920-1922 were black pages in Europe's history. As an example of that period I would like to include an episode I witnessed during a survey of lignite resources in Tuscany in the spring of 1920. Near Livorno on the coast of the Ligurian Sea at the foot of the white marble mountains of Carrara is situated the small town of Via Reggio, a popular summer beach resort. During the time I was there it was just a quiet city waiting for the summer season. On the other side of the mountains was situated another Italian city, a town of old medieval fame, Lucca, and, as is often the case, there was a strong feeling of dislike between these two neighboring cities. On a Sunday in April of 1920 the Soccer Team of Lucca was invited to play a match against Via Reggio. The game started on that Sunday afternoon and the whole town of Via Reggio came out to see it. Everything went well. Via Reggio made two goals and everybody was cheerful and happy. When the game was half over the Lucca team became stronger, made two goals also and equalized the score. The crowd could not stand that. It protested the decisions of the umpire, broke up the game, and the referee had to ask for police protection. Immediately the public turned against the police and the policeman attacked had to draw

his gun and shoot into the air. A general turmoil followed, and to my great surprise, Via Reggio considered it the right moment to start a red republic based on Soviet principles, independent of the Kingdom of Italy. For three days I lived inside that republic. The main railway from Rome to Genoa was blocked. A temporary government was formed and Via Reggio invited the rest of Italy to join its example. But the other towns, jealous of Via Reggio, did not join that movement, and on Wednesday, seeing the impossibility of continuing their new State, the prefect of Tuscany was invited to start negotiations. Blind-folded he came over the barricades and into the town to talk things over. After it was agreed that nobody should be punished, Via Reggio again entered the Kingdom of Italy and the incident was closed. I do not want you to think that only Italy behaved in that way; nearly all over Europe there was the same political, social and economic disorder.

Efforts at Economic Reconstruction

But after 1922 there came a change. Gradually the adjustment to new conditions took place. Manufacturing industries were turned from war production to that of peace. Salaries went down in order to make production possible. The gradually diminished crop acreage and stock increased again and attained pre-war standards. The war influence on Europe's vitality finally vanished and Europe once more showed the energy one could expect from its historical background. Social conditions were still low, but Europe had started to work to rebuild its economic position. Many difficulties had to be conquered. Perhaps the most important of these difficulties was the division of Europe into twenty-seven political units. Due to the war experience, every unit tried to be self-supporting, and tried to attain that aim by introducing a system of import duties suitable to that purpose. A new war started. This time a war of tariffs.

In the beginning many countries gave the impression that they had found the right way to conquer the difficulties. A distinct progress took place and trade showed better results year after year. Even in backward Eastern Europe that was the case. In many ways post-war conditions were even more difficult there than in the Western European countries. Born, or revived after the war, with new boundaries often not based on economic facts with agrarian conditions entirely different from the old pre-war system, many

of these countries had a hard time to adjust themselves to the new conditions. But even here progress was visible and it seemed that, in time, these countries might work out their difficult economic problems.

Europe regained its self-assurance and started out to regain its former economic world position. However, this aim was far more difficult to attain than the internal adjustment. The United States of America had secured a strong position in the world and was increasing its exports year after year. In most ways self-supporting, it followed a system of tariff protection, which it considered the base of its prosperity, and its standardized products appeared destined to dominate world markets.

In order to face that economic competition the European countries had to cooperate, and in the years from 1925-1928 we see the establishment of a great number of economic agreements, the so-called cartels, between economic groups in different countries in order to control production and divide the world market between them. These cartels, in the beginning few in number, increased rapidly and after a while these economic ties bound the different European countries together more than political agreements had ever bound them before the war. Their greatest advantage was that they over-bridged post-war political difficulties, showed the necessity of economic cooperation, and prepared Europe for the next stage in its economic development.

But even these cartels did not bring the results that had been expected. When, ten years after the war, Europe checked up the balance of its economic developments the results were still unfavorable. The system intended to make each State an economic, self-supporting unit had, after the first impulse, failed because each State did not possess adequate geographical resources. It is interesting to note that in the only country where the system did work satisfactorily, geographical conditions were very favorable. That country was France. With the exception of resources for its textile industry, France had a favorable climate, rich soil, geological structure and a social system, that gave it the real background to become a self-supporting unit; a unit not dependent on foreign economic influences.

But elsewhere the lack of geographic foundation prevented further economic development. Traffic was still greatly hampered by the numerous boundaries and their consequent delay. The logi-

cal exchange between industrial Western Europe and agricultural Eastern Europe could not develop sufficiently because of the nationalistic economic policies of the different countries—and the Danube, Europe's great potential trade vein, was still neglected. Social standards were still low and the average salary buying power in Europe was only half to a quarter of that of the United States. Europe, instead of showing reasonableness and harmony was still seriously disorganized.

PAN EUROPE THE SOLUTION

It was then that the idea of Pan Europe, born long before in the brains of a few idealists, came to the foreground. This idea is not a new one, but it was forgotten and lost, and even the aims of imperial Germany before the war, as indicated by the slogan "Berlin-Bagdad" only covered a part of Europe. After the war the idea was taken up by an Austrian nobleman, Count Coudenhove-Kalergi, who, as the founder of the Pan Europe magazine, became more or less the sponsor of that idea: but even then, he was considered a harmless fanatic, and only a few Europeans took his principles seriously.

But the breakdown of Europe's economic future, based on the existing economic principles, brought the idea of more intense economic cooperation once more to the foreground and the great leaders of different countries joined that movement. Briand in France, Stresemann in Germany, Benes in Czechoslovakia, to mention only a few, became leaders of the proposed plan to combine the twenty-seven European countries into one economic unit.

The idea of Pan Europe was, in the beginning, very often misunderstood. It was never the aim to copy the United States of America and make it one political country with one language. The great variety of physical, racial and social conditions in the different parts of Europe make one political unit an impossibility. One could never assemble the entire population of Europe, as in one large box, mix them freely, and tell them to talk one language and follow everywhere the same rules. I myself strongly believe in the great advantages of political and cultural variety. In that lies the economic strength of Europe. It gives the necessary stress to keep Europe alive: monotony, even in an economic sense, would kill. Standardized America and Europe with its great variety of production will be the two essential factors for the future world

market. We will never see one political Europe with one constitution and one parliament.

The second point is that many regard this system of Pan Europe as a weapon against the economic pressure of the United States. In some ways that is right. With America's system of high tariffs shutting off Europe's products and basing its whole industrial position on that protection, the feeling in Europe against America is not only unfavorable because of the non-cancelling of war debts, but also because of the great economic disadvantages to Europe in its trade with the United States. Because of its complex structure of twenty-seven different countries and the lack of cooperation, Europe did not have the strength to ask the United States for better trade conditions under the basis of reciprocity.

Two years ago a European country (France) protested against America's economic principles, and altho that protest did not have much result, Europe saw for the first time the weak points in America's armor.

But Pan Europe as an economic unit would not mean the downfall of the European trade of the United States. Perhaps trade conditions would be less favorable; perhaps there would be an adjustment to these new conditions, but cooperation in Europe and the dismissal of economic barriers would mean more traffic, more trade, more economic progress, a higher standard of life and a better buying power. And a prosperous Europe will mean a better market for American products. In that way an economic United States of Europe will be an advantage and not a disadvantage to the United States.

Of course, in spite of a number of recent optimistic speeches, one cannot expect that Pan Europe will be a fact in the next few years. There are still a number of obstacles. Jealousy and mistrust still exist. Many countries who have started on the road to become self-supporting will protest against that change, because many of their newly gained manufacturing industries will break down, as they are not based on geographical resources. In land utilization, one may even expect a sharp decrease in acreage, as many sections will not be able to compete any longer. A total economic rearrangement will have to take place; this time not based on political boundaries, but on geographical principles. As I said in the beginning, gradually they will prefer in Europe the risk of cooperation above the risk of further tariff protection. Where one system failed, the

other one has to be tried out, and when that feeling prevails, the difficulties are only there to be conquered.

OTHER PROBABLE ECONOMIC GROUPS

What would Pan Europe mean to the world? In my discussion I have omitted Great Britain and Russia, because both countries will probably not join a future economic European combination. Russia, an empire in itself, will never join as long as its present political system exists; Great Britain probably will see its future in economic cooperation between itself and its dominions. That would give four great economic units in the world. Perhaps that would force the foundation of two other combinations: a Latin economic unit in South and Central America; and an economic agreement between China and Japan. A future world containing six great economic empires, each one a legitimate product of geographical resources—that is, in my opinion, the inevitable future of the world.

It is up to geographers to help direct that movement. The movement is a geographical one, and geographers should rise to the occasion. They should provide the material on which these economic structures should be based. They should become the leaders of the future, because that future will be based on geography. And if we go even further, there will be a time when these six units will have to combine into an economic United States of the World. That would never mean a political unit. Each country would still have its own language, its own rules, its own historical, racial and social background; but it would mean free trade for the whole world; a world without economic boundaries; a world based on logic—economic harmony.

Many of you will consider me an idealist. I like to be an idealist. In many ways I think we geographers should be idealists. But it is not an ideal only. It is more. It is based on truth. The world, as I see it, will be a better world; a world of prosperity, a world of progress; and it is up to geographers to make that world a reality.

LIFE IN A COTTON FARMING COMMUNITY

WILLIAM T. CHAMBERS
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Whiterock is a rural cotton farming community in the northeastern part of the Black Prairies of Texas. It is located on a state highway about eight miles east of Clarksville, and derives its name from a local outcrop of the limestone bedrock which underlies that rich agricultural region. Whiterock is an aggregation of farmsteads and tenant houses interspersed with fields and pastures, and connected by the highway and farm lanes which lead to the several residences. The population consists of white families which have farmed the fertile black land for several generations and Negro tenants and farm laborers.

FIG. 1. The principal store and business center at Whiterock.

The neighborhood structure is typical of small rural Cotton Belt communities. Most of the people engage in farm cultivation and management. The two stores retail general merchandise including staple foods, clothing, shoes, utensils, farm implements, and gasoline; and compete actively for the trade of the population. They extend credit to farmers at seasons when they have little income and during years when the market value of crops is small; and the farmers in turn allow

FIG. 2. Manufacturing Whiterock. The building with a smoke-stack is the cotton gin. A cotton-seed conveyor connects it with the "seed house" which is in the center. The blacksmith shop and grist-mill occupy the building on the right. Note the ricks of fire-wood for use as fuel in the gin and the pond from which water is pumped for the boilers.

some credit to their tenants and hands. The gin prepares the cotton crop for marketing and the blacksmith sharpens plow points, shoes horses and mules, and repairs wagons. There are separate churches and schools for the whites and the Negroes—an expression of the deep rooted cleavage which separates the inhabitants into distinct communities which cooperate effectively in industry but maintain great social distance.

CROP PRODUCTION

FIG. 3. Chopping cotton in the Whiterock area.

Altho Whiterock is in the Cotton Belt, it is not narrowly specialized in cotton production. Some fields have grown cotton and corn for more than sixty years, but the industry is now threatened by decreasing soil fertility, by boll-weevil infestation, and by the persistent spread of Johnson grass which was introduced into the area as a hay crop. These factors stimulate interest in general farming and live stock industries.

Farmers devote much time and effort to the production of cotton which is the chief source of money income and is frequently referred to as "the crop." The land is plowed and "bedded" in early spring, but planting is delayed until the soil is thoroly warm and dry enough to work easily. Cotton seeds rot when planted in cool wet soil, and growth is seriously checked by periods of cool wet weather; but warm sunny days with occasional showers stimulate prompt germination and

FIG. 4. A stand of volunteer oats at Whiterock.

rapid growth. The crop is "chopped" with the hoe to an open stand because abundant sunshine favors development of bolls and reduces boll-weevil infestation. Hot dry weather favors the maturing and harvesting of cotton. It is picked by hand because all the bolls do not open at one time and they should be gathered promptly to prevent deterioration, and because a machine which picks ripe bolls more efficiently than the human hand without injuring the late part of the crop has not been invented. Riding cultivators drawn by mules are used generally; and women, boys, and girls—especially Negroes—help chop, hoe, and pick cotton. After ginning and baling the staple is ready to market, but some farmers hold their cotton when prices seem unsatisfactory. The seeds are marketed, exchanged for cotton-seed meal and hulls, or used directly as live stock feed.

Corn is also an important crop of the farmer. It is planted earlier than cotton, and on most farms is rotated with that crop. The rich soil enables a grain yield double that obtained on the loam and sandy lands of eastern Texas. Mature ears are pulled from the stalk and stored at the barn. The ears are husked and fed to livestock. The husks are a good roughage feed. Corn stalks are chopped into pieces with cutters and plowed under to serve as fertilizer.

Cattle Raising

Cattle raising is becoming an important industry. The fever tick has been eradicated recently, and some farmers have herds of beef cattle while all of them have milch cows. Bermuda grass pastures are grazed thruout the year but have comparatively small value during late summer droughts and in the coldest winter weather. Johnson grass makes fair pasture during the long growing season. These grasses make good hay,

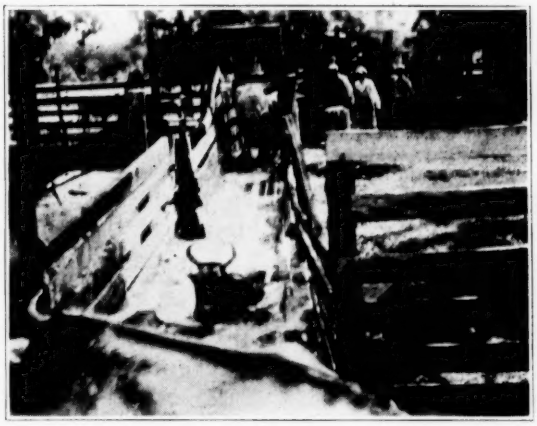

Fig. 5. Dipping cattle at Whiterock. The county was pronounced free of fever ticks in 1929 and this work was discontinued.

and oats produce abundantly without annual planting because a volunteer stand ordinarily comes up in the autumn and lives thru the winter to make a crop the following spring. Higeria, a grain sorghum being introduced in the area, yields two or three crops of grain and forage a year. These crops, as well as corn and cotton-seed meal, are good cattle feeds. Most of the beef cattle are shipped from Clarksville, the county seat and nearby railroad town, to the Fort Worth Market; but some are slaughtered for local markets. Cream is shipped to the creameries at Fort Worth, country butter is sold in Clarksville, and a milk station soon will be established in the latter city with a route to the milk products plant now being constructed at Paris. This promises a large market for milk, and farmers are improving their dairy herds in anticipation of its development.

FIG. 6. A farm herd in the Whiterock area. Grade Jersey cows and a Hereford sire indicate interest in production of calves for market as well as milk and butter.

SUPPLY PRODUCTS

Several commodities produced in the Whiterock area are consumed by the population. Milk, cream, and butter are used abundantly as foods. Hogs fattened on skimmed milk and corn furnish ham, sausage, bacon, and lard; and there are plenty of chickens and eggs. Corn bread is made from grain produced on the farm. Vegetables are grown in the home garden, and pear and peach trees yield supplies of fruit. Bees make honey from the nectar of cotton blossoms, and some peas grown in corn fields to enrich the soil are threshed for home use. Pecan trees which thrive in the creek bottoms bear delicious nuts, and wood fires burn brightly in family fireplaces during cold winter weather.

THE FARMSTEAD

The farmstead occupies one or two acres of land. The home, which varies from attractive new frame residences to old dilapi-

dated ones, is the most conspicuous and well cared for building. The yard is set with Bermuda grass and there are a few shade and fruit trees. Most barns are unpainted and contain a hay-loft, stalls for mules, horses, and cows, and cribs for storing corn, cotton-seed, and cotton-seed meal. Other buildings are the garage, tool-shed, chicken-house, and smoke-house. Rain water from the house roof is collected in cisterns and used for household purposes. There are no wells because the ground water is mineralized and very hard. Livestock drink from "pools" or ponds into which surface water drains in wet weather. The black clay soil puddles, retaining the water efficiently during droughts.

HOME LIFE

Work has precedence over leisure at the farm home. The day's activity begins between four and five o'clock in the morning. Men feed the livestock, milk the cows, and harness the horses while the women prepare breakfast. After the milk is separated and breakfast is eaten, the work planned for the day begins. During the long growing season the men work with their crops. They also take produce to market at Clarksville, clean the stalls at the barn, repair fences, chop Johnson grass, shuck and shell corn, thresh peas, cultivate the vegetable garden, and work at the automobile. Women work about the home cooking food, keeping house, caring for children, making butter, washing the cream separator, feeding chickens, gathering eggs, and filling the kerosene lamps. Among landowners it is customary to employ Negro women to wash clothing and at times to help with the house work.

The people also have considerable leisure. Cultivation is discontinued during wet rainy weather, and no crops are grown in winter. The Dallas *News,* the Clarksville *Times,* and other periodicals delivered by rural mail route are read regularly. Cotton and livestock market reports are heard by radio as are concerts and other programs. Women do beautiful embroidering, crocheting, and knitting; and keep in close touch with neighborhood events by telephone. Men loaf at the stores discussing farm problems, politics, and other topics of mutual interest. The children play in the yard, the hay-loft, and cotton-seed crib; and when they are old enough swim and fish, ride horses, hunt and trap, and perhaps take music lessons.

COMMUNITY LIFE

The church and school are important community centers. People gather at the church to discuss the Sunday school lesson and hear the circuit minister preach. The revival meeting is held in summer after the cotton crop is "laid by," and ice cream and box suppers are held in the church tabernacle occasionally. The school directs much of the educational and social life of its pupils, and at intervals parents and children assemble at the school building for recreational purposes.

Groups of young people maintain an active social life. The young men organize a baseball club each summer. They play teams from neighboring centers when the soil is too wet to cultivate and during the intervals between the last plowing of cotton and the picking season. Young men and women hunt opossums and picnic in the woods along the bayou on clear moonlight nights. Private dances are frequent, and ice cream and box suppers attract good crowds.

Neighborhood life is especially well developed among the Negroes. The church and school are organizing centers, and there is a Negro baseball team. They have frequent "festivals" at which barbecue, water-melon, ice cream, and other foods are attractions. The Negro county fair and carnival is a social event of major importance. Funerals are great occasions. The Negroes quit their work and come to join in mourning, singing spirituals, listening to the sermon, and paying last tributes to the dead. The nineteenth of June, "June-teenth," or Independence Day, is the chief event of the year. Work is forgotten, best clothes are donned, and the entire Negro community assembles for a day of celebration including barbecue, picnic, baseball games, and social festivity.

Whiterock is now in a phase of community reorganization. The highway and automobile place its people within twenty or thirty minutes drive from Clarksville; whereas a few years ago the trip required hours and was almost impracticable during wet weather when large masses of sticky black mud gathered on wheels, and ruts became so deep a team could scarcely pull an empty wagon. Land owning families have good automobiles and tenants have low priced ones. They visit Clarksville several times a week to shop, sell produce, consult physicians, go to the movies, attend church services, and take children to high school. Some of their friends and relatives live in Clarksville, and family interests and social life are

gradually merging with those of the larger center. This process of urbanization threatens ultimate disruption of organized social life at Whiterock and the absorption of its elements by appropriate larger groups in the population of the city.

CONCLUSION

Whiterock, a cotton farming neighborhood in the Black Prairies of Texas, is typical in a general way of small rural Cotton Belt communities. Cotton production is the dominant objective of farm activity, but corn is an important crop and oats, hay, and higeria are raised. Cattle raising is attracting increased attention. Some farmers use old fields for grazing beef animals while others prefer dual purpose herds and sell fat calves as well as cream, butter and milk. Home life has been modernized by the automobile and radio, and farm labor lightened by the use of machinery including the cream separator, hay baler, binder (for oats), cultivator, planter, stalk cutter, bedder, and other farm implements. Pronounced social cleavage separates the whites and Negroes into distinct societies. The hard surfaced highway and automobile so facilitate contact with Clarksville that community life is merging with that of the larger center, and several former inhabitants of Whiterock now reside at Clarksville and in the larger cities of Texas.

GEOGRAPHIC SIGNIFICANCE OF CALENDAR CHANGES*

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EVOLUTION OF THE CALENDAR

In the year 738 B.C. Romulus gave the world the first Roman Calendar dividing the year into ten months. Such a year was 50 days less than the lunar year and 61 days less than the solar year. Its beginning did not correspond with any particular season. In the year 713 B.C. Numa Pompulius added two months to the calendar which standardized it until after the conquest of Egypt. In the year 46 B.C. Julius Caesar adopted the Egyptian Calendar for the Roman Empire, except that he did not continue the equal month plan of the Egyptian Calendar. The year of the Egyptian Calendar contained twelve months of thirty days each with five extra days devoted to festival holidays. This calendar was defective, for the solar year consists of 365 days, five hours, 48 minutes and 46 seconds and not 365 days and six hours as set by Julius Caesar. The five extra days of the Egyptian Calendar were distributed thruout the year by giving odd number of days to every other month and taking off one day from February.

In the year 28 B.C. Augustus Caesar took another day from February and added it to August to give it 31 days in order to have as many days in the month of his birth as in the month of July which was the birth of Julius Caesar.

This made the quarters of unequal length and serious objections were raised by property owners who collected their rents by the quarter. In order to adjust the matter Augustus Caesar moved September 31 to October 31 and November 31 to December 31. No further changes were inaugurated until 325 A.D. when the Christian Council at Nicaea decreed that Easter must fluctuate to follow the first full moon after March 21. This change was needed to assure moonlight for the pilgrims on their journeys between cities where the Easter ceremonies were held.

By 1582 the error of about 11 minutes per year had accumulated until it amounted to ten days. This shifting of the dates away from

* Abstract of Report of Committee on Calendar Simplification of National Council of Geography Teachers.

the season became undesirable because it brought Easter and all the other movable festivals at a wrong time. It remained for Pope Gregory to correct it, making the 5th of October 1582 the 15th. In order that the error might not occur again he ordained our present method of determining leap year.

Owing to religious antagonism the Protestant world refused to accept the arithmetical advice of the Pope until nearly two centuries later. In the year 1751 Great Britain and its dependencies corrected their time error of eleven days and called September 3 September 14.

DEFECTS IN THE PRESENT CALENDAR

In the report to the League of Nations, by the Special Committee of Enquiry into the Reform of the Calendar, three main undisputed defects of the present Gregorian Calendar were cited. First, the inequalities in the length of the divisions of the year. Second, the month is not an exact multiple of the week. Third, the lack of fixity.

In the present Gregorian Calendar the unequal length of the month, quarters and half years is a cause of confusion and uncertainty in economic relations, in the compilation and arrangement of all statistics, accounts, etc. Thruout the year the months vary in length from 28 days to 31 days. There is a difference of 11 per cent between the length of February and the length of March.

There is even a greater difference between the number of working days making it an important factor in industry. The variation of the month from 28 to 31 days accounts for the fact that salaries, rents, interest, pensions, etc., which are based on a monthly payment plan, are inaccurate for monthly comparison or calculation.

Banks are obliged to spend considerable time in referring to special tables in order to make daily calculations on current accounts. In Europe the unequal length of the months has led financial concerns to calculate deposits and current accounts on the basis of a year of twelve months or 360 days whereas in discounting bills the year is reckoned at the exact number of days or 365.

The second defect of our present calendar which causes difficulty is that the month is not an exact multiple of the week, some months having four weeks and some a few days more. This is perhaps the greatest drawback from a statistical and commercial point of view.

Since the month does not from year to year include the same number of weeks and consecutive work days, there can be no genuine statistical comparison between one year and another, while various subdivisions of the year itself—the half year, quarter and months—are likewise incapable of comparison.

Third, the calendar is not fixed. Easter under our present calendar fluctuates between March 22 and April 25 over a period of 35 days. This lack of fixity causes a corresponding displacement of the movable festivals. Numerous disadvantages result, both from a civil and religious point of view. Our schools, judicial work, and commercial interests, including those related to transports, are particularly affected. Our school dates and many of our holidays, both national and otherwise, are fixed. "An early Easter encourages the buying of textiles if the weather is favorable but if Easter is late there is more tourist business but the textile trade in spring wear is severely injured because summer articles are purchased at once." In a general way, the organization of traffic and transport is disturbed by the changing date of Easter and other fluctuating dates.

Movement for Calendar Simplification

In 1922 the International Chamber of Commerce requested the League of Nations to take up the question of Calendar Simplification. In response to this request the League of Nations, in 1923, appointed a committee who examined 185 proposals and reported their findings to the League. The report of the committee was accepted and transmitted by the Secretary-General of the League of Nations to the members and to the United States requesting them to establish a committee to investigate and report on the Calendar Reform. February 18, 1929 the Pan American Conference at Havana, Cuba adopted a resolution recommending that each of the Latin American States appoint a National Committee to study the question of calendar simplification, and that they make the necessary preparation to participate in an international conference to determine which is the best method of reform.

Beneficiaries of the Calendar Revision

Agriculture. In all forms of commerce and industry we feel the vital influence of agriculture. It is fundamental to the progress of all forms of enterpise affecting the existence of the human race.

With so many varied industries dependent upon accurate statistical information, particularly of an agricultural nature, it is vitally important that they be accurately and completely compiled to disclose the trend from time to time. Defects from the variable time element make statistical data incomparable one month with another. Without a doubt this annoying factor could easily be reckoned with by the adoption of the proposed 13 month calendar of 28 days to each month.

Science. Whenever science is called upon to furnish data, where time is an element, as in the case of meteorological observations, crop production, etc., the irregularities of our calendar cause no end of trouble in summarizing the data. "Meteorology can supply many instances where the uncommensurate relations between the present time units are wasteful of time or productive of crude and unscientific results." "To those whose daily work brings them face to face with the faults of the present calendar, it seems that only habitual use of it by those who are unconscious of the needless waste it entails can explain how anyone can advocate its perpetuation. On the other hand, only lack of acquaintance with the simple elegance of the 13 month plan, and the scientific and civil benefits that will accrue to all humanity by its adoption, will cause anyone to oppose this reform."[1]

Education. There seems to be no place where the revised calendar would be more welcome than in the field of education. It would simplify many details of administration in the operation of public schools, colleges and universities. Thruout the country the 4 week month has been universally adopted in our public schools but still our holidays and vacations must conform to the calendar of today necessitating a new calendar for each school year.

School statistics could be more accurately compiled and would be ultimately more reliable and valuable. Comparative studies of school work and school expenditures could be based upon factors of greater uniformity and would be therefore more reliable.

Labor. Simplification of the calendar is especially important to employees as classed under the Department of Labor and those whose remuneration is based upon some division of the year. The movement to place holidays on Monday will extend the worker's week-end vacation one more day and will be of special interest to him. Equal week periods will tend to preserve a better balance

[1] C. F. Marvin, Chief of U. S. Weather Bureau

between earnings and spendings, especially as related to the worker's household economy. There seems to be in addition to the general advantages which have already been cited some specific merits which apply to those who are wage earners and may be summarized as follows:

1. Increased facilities for more regular collection of wages when payable half-monthly or monthly.
2. Relief to workers from troubles caused by the now unequal intervals between dates of pay-day and dates when rent, cost of food, and monthly installments must be paid.
3. Equal times for earning and spending would, by quicker turnover of money, help to increase regular work and reduce drains on unemployment funds.
4. The equal periods for accounting by employers would yield truly comparable statistics, and eliminate the misleading deflections the present unequal months cause.
5. Facilities for profit-sharing would be improved by more regular and earlier distribution of profits among workers.
6. Co-partnership accounting by the four week periods would bring earlier and better apportioned payments to workers and their families.

PROPOSED PLANS

The committee appointed by the League of Nations to study the calendar revision was composed of representatives appointed by the Roman Catholic, Eastern-Orthodox and Protestant religious authorities, astronomers, and the International Chamber of Commerce which represented the business organizations of the world. With the able assistance of Mr. Moses B. Cotsworth the committee analyzed 185 proposals for calendar simplification received from 33 nations in many different languages. All the arithmetical defects in the present calendar are due to three features: first, months are unequal; second, the months are not an exact multiple of the week; third, the ordinary year consists of one day over 52 weeks. Of the two general plans to eliminate these features the most favored was the International Fixed Calendar of 13 months with 28 days each. An extra day, June 29, will be placed between June 28 and the first day of the new proposed month of Sol to be inserted between the months of June and July. Easter will probably be fixed and will fall regularly on April 8.

THE THIRTEEN MONTH PLAN

We know that the length of the day and the year are inexorably fixed by the laws of nature and that humanity will neither tolerate any change in the length of the seven day week nor give up some form of month which is a man made division of time and should be standardized for universal convenience. It remains then to redivide the year of 52 weeks into some convenient and acceptable groups of weeks or months. The 13 month calendar of four weeks each seems to be the most favored arrangement. The chief benefits of this plan as outlined by its supporters are as follows:

1. All months would be equal, having exactly the same recurring 28 week-days.
2. The days of the week would always indicate the monthly date, and conversely, the monthly date would indicate its week-day name. Both day and date could be recorded on clock and watch dials.
3. The complete four weeks would exactly quarter all months thereby making more regular the weekly and monthly work, payments, productions, etc.
4. Pay-day would recur on the same monthly date, which would facilitate both business and home life.
5. All periods for earning and spending would be either equal to or exact multiples of each other.
6. Holidays and other permanent monthly dates would always occur on the same week-day.
7. Every month-end would coincide with the week-end. Fractions of weeks at month-ends would cease.
8. The reckoning of lapse of time for interest and other purposes would be greatly simplified.
9. As there would be 13 monthly settlements during the year instead of 12, there would be a faster turnover in money.
10. Special attention is called to the advantages to industry if all holidays are placed on Monday.

DISADVANTAGES

The thirteen-month year offers some advantages, in that every month would have four weeks a total of 28 days, which would be of great convenience in weekly accounting but we could have no half-years or quarters, etc. since thirteen is not divisible by 2, 3, 4, or 6.

The thirteen-month calendar would cause a serious revision of

aniversaries and require thirteen business closings instead of twelve involving increased bookkeeping and added expense. Annoying difficulties would arise in the comparing of statistics and date correlations would be confusing. "The only serious objection on religious grounds has come from certain groups of Orthodox-Jews, who maintain that the insertion of an extra day in the year would conflict with Mosaic Law requiring every seventh day to be observed as the Sabbath."

PROCEDURE FOR ADOPTION OF THE NEW CALENDAR

"When the National Committees of the different countries reach their conclusions and if a prevailing desire for calendar improvement is shown, the calling of an international conference would follow. Such a conference could, of course, be called by the United States or any other nation at any time."

"An act of Congress stating that such a calendar would take effect on a certain date, simultaneously with all other nations and probably two or three years in advance, would include, as a part of it, an adjustment table and would provide that dates on existing bonds, mortgages, leases, contracts, etc., would be automatically changed to the corresponding date of the new calendar as determined by adjustment tables. If the thirteen-month plan should be adopted, it would also provide for the prorating of fixed charges—monthly rent payments, for example, would be reduced by the yearly total being divided by 13 instead of 12."

If adopted or when adopted it will make life easier for the masses of men and women. It will tend to promote sensible and uniform religious observance. Most important of all, in the minds of practical people, it will save energy and money.

Those who are especially interested in further study of Calendar Simplification may secure helpful materials from the following sources which were invaluable in the preparation of this report:

International Fixed Calendar League,
1901 Wyoming Ave., N.W., Washington, D.C.

National Committee on Calendar Simplification,
Washington, D.C.

American Management Association,
30 Vesey Street, New York City, N.Y.

THE LOWER MISSISSIPPI AS A WATERWAY

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INTRODUCTION

It seems trite to say that development in transportation facilities should be based on sound economic principles. If records of past expenditures and service rendered by an inland waterway, and

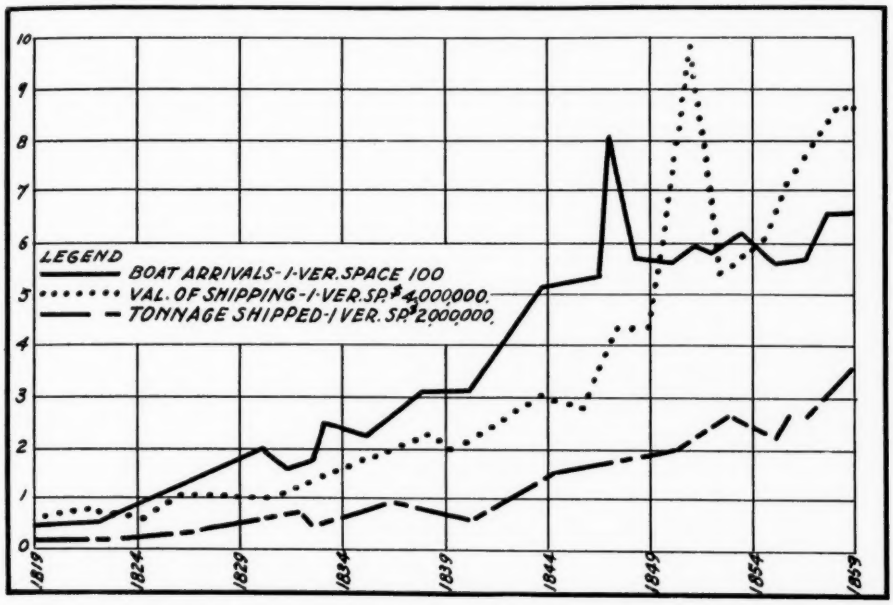

FIG. 1. Graf of early shipping on the Lower Mississippi.[1]

present conditions and future outlook clearly justify the enormous expenditures being made and proposed for such traffic, there should be no objection to waterway improvement. If not, it is time to stop our reckless expenditures for the purpose of preserving the departing glory which hangs about our navigable rivers. The services rendered to our forefathers should not motivate the erection of million dollar monuments by present generations. A brief survey of development on our greatest river reveals many interesting facts.

[1] Callender, *Economic History of the United States*, p. 315.

THE EARLY PERIOD IN MISSISSIPPI RIVER TRAFFIC

The commercial value of the Mississippi during early western development is unquestionable. Even before steamboats brought relief to upstream traffic, rafts and flatboats were of considerable importance in floating bulky raw materials to tide water, while by laborious efforts the scant supply of relatively costly imported wares were delivered to the interior. The arrival of the steamboat in 1814 gave great impetus to shipping, and was particularly important in removing the handicap to upstream traffic. The following graf shows the increase in boat arrivals, tonnage of products, and value of products handled at New Orleans over the most important period of river navigation.

The last decade preceding the Civil War showed little variation in amount of traffic on the Lower Mississippi, but various changes in the commercial system are noticeable. Altho the Ohio Valley was ahead of the western territory in development, Cincinnati by 1850 had lost first place to St. Louis among the upper river cities. During the years about 1816, 80 per cent of the Mississippi River traffic came from the Ohio,[2] but by 1860 the Erie Canal and the railroads had definitely turned trade eastward. The increased tonnage at New Orleans was largely from local cotton, which more than offset losses in upper river commodities. Railways reaching westward from Charleston and Savannah had made inroads into northern Alabama, and Mississippi trade of this area which had formerly gone by the Tennessee was less in 1860 than it had been in 1845 altho production in that part had grown many times larger.[3] The same trend is evidenced in the upper Mississippi region also. From 1840 when railways began entering the Mississippi Valley, people of the West became less interested in the southern outlet, and altho a heavy traffic continued between St. Louis, Cincinnati, and Pittsburgh there was a marked decrease in western produce received at New Orleans.

The Civil War hastened the all-but-complete shift to east-west commerce. The decline in north-south traffic gave the railroads opportunity to become much better equipped to handle shipments. Following this period, altho the river continued to be a highway of considerable importance, railway development was such that the river rapidly became of little relative service. The public in general

[2] *Ibid.* p. 316.

[3] Callander, *Economic History of the United States*, p. 319.

accepted the decay of waterways as the passing of an antiquated means of transport and turned their efforts to the improvement of railway deficiencies. St. Louis traffic is typical of the Lower Mississippi conditions which prevailed into the twentieth century. In 1871 freight receipts and shipments of that city amounted to 4,913,102 tons of which 1,654,899 tons were moved by river and 3,258,202 by rail. Up to 1887 river tonnage fluctuated around this low level, while rail traffic reached almost 13,000,000 tons, or ap-

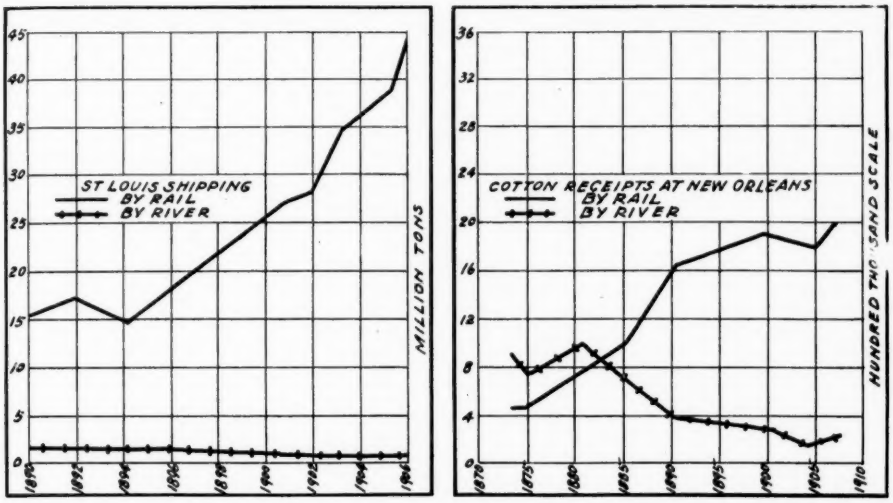

FIG. 2. Grafs showing loss of river traffic to railways.[5]

proximately 90 per cent of the total.[4] By 1906 the river was almost abandoned (Fig. 2).

In general, waterways were largely abandoned because they are inferior to railways in most particulars. Inability of the waterways to withstand railroad competition, however, was due to fundamental and inherent defects of river navigation. The most important of these are: (1) wide variation of depth of channel from high to low water; (2) shifting channels, especially from work of floods; (3) closing from ice in winter; (4) variations in depth from lower to upper portions of streams; (5) cost of transhipment from feeders to waterways; (6) difficulty of terminal construction due to rise and fall of rivers; (7) slowness of waterway traffic, coupled

[4] Department of Commerce, *Inland Water Transportation in the United States*, Miscellaneous Series, no. 119, p. 41.

[5] Moulton, H. G., *Waterways* vs. *Railways*.

with American impatience; (8) greater risk involved in shipping. All of these apply in full to the Lower Mississippi save number 3, and in this case ice hampers between Cairo and St. Louis some three months of the year. One of these handicaps was well demonstrated in 1922 when low water cost the Mississippi Barge Line more than $500,000.

Modern Epoch in Lower Mississippi Traffic

New interest was aroused in time to save waterways from complete abandonment. Altho renewed agitation began about 1895, the modern epoch in inland waterways development may be said to begin with the St. Louis convention and the Washington session of the Rivers and Harbors Congress, both held in 1906. For more than a decade following this date the public was flooded with waterway propaganda. Most of the arguments, as has always been the case, hinged about the question of rates. For defensive purposes many misleading calculations and illogical comparisons were put forth. Also many of the arguments were political in nature and of local interest only.

Altho the question was continually brought before the public, Mississippi traffic continued to follow the course of decline experienced by inland waterways in general, the Great Lakes excepted. In 1918 less than 4½ million tons of freight were carried on all the southern section of the river.[6]

At this point it is of interest to note something of the correlation between river costs and the use of the river. Preceding the Civil War, the period of greatest usefulness, only small expenditures had been made, mainly for removing minor obstructions, such as snags and rafts. Appropriations became more generous after the Civil War period, and by 1900 many times more had been spent than during all pre-war years. By 1918 money spent in improving the river had mounted to around $100,000,000 altho traffic was at the very low mark just noted. Thus it is seen that expenditures had little if any affect in keeping alive this route of commerce. The tonnage moved on the river tended to be inversely proportional to money expended.

More than a decade of effort and agitation apparently had achieved nothing other than the securing of government appropriations. The World War period, however, aroused new interest in

[6] *U. S. Statistical Abstract*, 1924, p. 392. Note: Duplications are responsible for part of the tonnage cited. *U. S. Statistical Abstract*, 1924, p. 392.

waterways. Congestion of railway traffic led some to believe that the railroads are incapable of handling our inland commerce. The second phase of the modern epoch in Lower Mississippi history, the establishment of a government barge line, was inaugurated in 1918. From this date on equipment has been added from time to time till December, 1928 the government fleet consisted of 79 cargo barges, 11 tow-boats, 3 self-propelled barges, 2 harbor tugs, and 34 miscellaneous units.[7] A report of 1926 states that terminals varying in cost from $250,000 to $1,500,000 each had been constructed at St. Louis, East St. Louis, Cairo, Memphis, Helena, Vicksburg, Baton Rouge, and New Orleans.[8] For several years arrangements have been made for joint rates with railways, truck delivery service, and railroad detour service for ice-bound periods between Cairo and St. Louis. The tows have been equipped with wireless conveniences for keeping in touch with the central station at Memphis. The operation in general has been made more dependable.[9] Actual figures in the following table for 1918-28 inclusive show an admirable increase in traffic handled and revenue collected, if considered from a percentage basis:[10]

Year	*Tonnage*	*Revenue Collected*	*Operating Income Excluding Depreciation*
1918	23,378	$ 189,158	$113,813
1919	104,769	921,486	540,390
1920	160,702	1,304,959	596,212
1921	443,267	1,640,107	152,432
1922	599,669	2,439,705	188,748
1923	710,431	2,461,280	41,089
1924	849,503	2,937,625	159,722
1925	910,755	3,025,958	521,031
1926	1,049,649	3,723,855	787,853
1927	1,237,452	4,658,603	568,512
1928	1,435,560	5,532,421	702,468

Relatively few commodities constitute the bulk of shipping in both upstream and downstream traffic. Of the 1928 downstream traffic grain made up 261,494 tons, by far the greatest item, while cotton, iron and iron products, and canned goods followed with a total tonnage of 204,891. Two prominent items, bauxite and sugar, entered the upstream haulage, with a combined tonnage of 618,078.

[7] Ashburn, *An. Rept. of Inland Waterways Corp.*, 1928, p. 47.
[8] Ashburn, *An. Rept. on Waterways*, 1926, p. 13.
[9] McCombs, *Journal of Geography*, 1925, vol. 24, p. 17.
[10] Ashburn, *An. Rept. on Waterways*, 1928, p. 35.

The average 1927-28 south-bound traffic which is representative of all late years, amounted to 581,421 tons while the north-bound average reached 755,085 tons, or the north movement exceeded the south movement by 173,664 tons.

Traffic movement has been placed on schedule. Express package service is offered by a limited number of self-propelled barges which require six days downstream and ten days upstream between St. Louis and New Orleans. The freight barge schedule is ten days downstream and twenty days upstream.

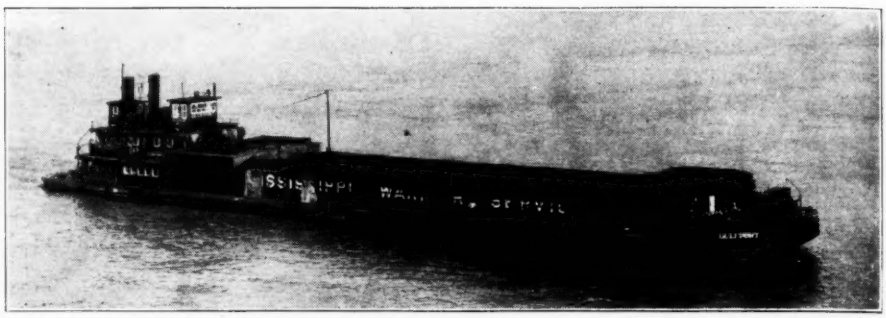

FIG. 3. One of the self-propelled barges in operation on the Lower Mississippi. These barges have a capacity of 1,000 to 1,400 tons each. Sailing between St. Louis and New Orleans requires six days downstream and ten days upstream. (Courtesy of Mississippi-Warrior Service.)

With this established service and also from the tonnage of shipping noted above, one might conclude that the river has become an important route of commerce. By comparison, however, the 1½ million tons carried by the river approach insignificance. For the year 1927 receipts and shipments of St. Louis alone amounted to 81,408,598 tons, or approximately 55 times greater than all Mississippi Barge Line tonnage for the same year. That is, all traffic which appeared on the Lower Mississippi Barge Line was less than 3 per cent the freight received and shipped at this single city, which itself is well located for river traffic. Of all the cities on the Lower Mississippi it appears that Memphis is especially well situated for using the river. It is well located for north-south trade between New Orleans and St. Louis, yet is distant enough to be out of the commercial shadow of these larger cities. The city is the greatest hardwood market in the world,[11] besides its great quantities of cotton and other ordinary freight. Its southern location permits year-

[11] Smith, J. R., *Commerce and Industry*, p. 236.

around navigation. By 1925 more than $250,000 had been expended on Memphis river terminals, and almost a million dollars more set aside for use when traffic should demand.[12] Three years later (1928), however, Barge Line shipping at this point amounted only to the very low figure of 266,711 tons.[13]

During 1926 the southern district of the Illinois Central Railway handled upward of 53,000,000 tons of freight, or approximately 35 times that transferred by the Mississippi Barge Line.[14] This point is made more striking when we consider the fact that the main line of the railway parallels the river.

FIG. 4. A tow of all-steel barges in use on the Lower Mississippi. The barges have a capacity of 2,000 tons each and require ten days and twenty days respectively for downstream and upstream movement between St. Louis and New Orleans. (Courtesy of Mississippi-Warrior Service.)

Shipment of certain commodities is equally impressive. In 1924, 3 ¾ million tons of lumber, logs, and ties from Mississippi and 1⅓ million tons of the same products from Tennessee moved over the Illinois Central Railway, yet none of these heavy and bulky items are listed in the Barge Line traffic. Mississippi cottonseed and cottonseed products alone for 1924 supplied 620,000 tons of freight to the Illinois Central, almost exactly one-half the total tonnage handled by the Mississippi Barge Line.[15]

[12] McCombs, *Journal of Geography*, 1925, vol. 24, p. 11.
[13] Ashburn, Annual Report, 1928, p. 46.
[14] House of Representatives, 10710, pt. 2, p. 416.
[15] Report, House of Representatives, 10710.

In actual practice we see that business interests use rail service. Again this is substantiated by the following survey of Memphis made in the summer of 1926. "A questionnaire was made out and sent to the principal representative firms in the city, asking their reason for not patronizing river transportation. The tabulated replies were as follows:[16]

		Per Cent
1.	Uncertainty in time of delivery	60
2.	No schedule sailing dates	49
3.	Inaccessibility to terminals	44
4.	High cost of handling by river	42
5.	Bad platform for handling goods	16
6.	Unsatisfactory rates	20
7.	Products unsuited for river transportation	18
8.	Damage done to goods	16
9.	Difficulty in getting bill of lading	11
10.	Expense of changing shipping methods	04

SUMMARY AND CONCLUSION

We are now prepared to state briefly the present commercial situation on the Lower Mississippi. The Barge Line is handling a small amount of freight at approximately 80 per cent of the railway rates. Joint rates have been arranged with various railroads and also provision for detour service between Cairo and St. Louis during the ice-bound period. The upstream traffic has considerably greater tonnage and requires double the time of downstream sailing; and when placed on a time-tonnage basis, is almost three times as great as downstream traffic. That is, the present traffic requires approximately three times the tonnage space for upstream as for downstream freightage. Not considering the hundred million dollars that have gone for Mississippi River improvement, the present investment in floating equipment and terminal facilities approximates $11,250,000. After these enormous expenditures the most favorably located business interests fail to patronize river shipping and point out specific objections to this service. In 1926 all railways entering St. Louis showed an average increase in shipping of 2.6 per cent over that of 1925, but the Illinois Central road paralleling the Lower Mississippi had a 6 per cent increase for the same period.[17] Finally, assumed profits derived from this enterprise are really very meager or even losses. If from the listed net gain of $702,468 for 1928 we subtract $450,000 for 4 per cent inter-

[16] Osment, O.C., Survey of Memphis, 1926, for M.A. thesis.

[17] Report of House of Representatives, 10710, pt. 1, p. 34.

est on the investment, there remains only $252,468 or 2.2 per cent profit on the investment. Furthermore taxation is not taken into account.

From the foregoing it is apparent that the introduction of the railroad ushered in a system of transportation which in general rendered obsolete the slow, unreliable river service. Since railways in their infancy not only succeeded in taking over the increase in freightage, but actually took from the river its established traffic, it is evident that the river has little hope of regaining an appreciable amount of shipping in competition with present giant railway systems. Altho the joint-rate arrangement is favorable to river shipping, the plan is uneconomical in principle and tends to disrupt railway service, the backbone of our transporation. Railroads must make a profit to exist, and rates lowered below cost of service in one section of the country must be made up by other sections. From a business standpoint the Barge Line is not a going concern, which without Government aid would likely cease to operate. The river seems suited best to carry heavy, bulky commodities ordinarily over short distances, and efforts to restore this route to a general traffic carrier appear to be doomed to failure.

GEOGRAPHY PROJECT ON INDIA

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Vincennes University, Vincennes, Indiana

The class in Geography Methods in Vincennes University had read and reported many accounts of projects which had been successfully carried out by children in various schools. Many had doubts whether or not such work could be done with children in the grades under ordinary conditions. The class came to the conclusion that it could be satisfied only after trying an experiment and seeing whether or not it was a failure or a success. Arrangements were made with the principal of a ward building and a teacher of the fifth grade to work out the project.

STEPS IN THE PROCESS

The first step was to secure a problem for solution. Each member of the methods class prepared a problem, then a vote was taken to decide which should be used in the project. The class decided

on this problem: How may living conditions in India be improved?

The next step was to procure reference material that the fifth grade could use. The class gathered material from the college library, the public library, and a few books and pictures in the ward building. Missionary journals and books were obtained from ministers and missionary societies.

The most difficult part of teaching by the problem method is to lead the class to suggest the problem, to have the problem come from them rather than superimposed from the outside. Books tell us that this is what should be done, but they do not tell us how to do it. It is much easier said than done. It is much easier to follow the lines of least resistance and follow the text, using the question-answer method, or the topic method.

PROCEDURE TO THE PROBLEM

The regular teacher introduced the work, but most of the teaching was done by members of the methods class, who were also doing supervised teaching. The fifth grade class had studied South America, and knew about winds, the equator, the tropics, belts of calms, regions of rainfall, and kindred topics. An interesting lesson was given on monsoons, and the children understood the great seasonal movements of winds, rain, and sunshine. They saw the influence of high mountains and of great bodies of water.

By looking at maps they saw the great rivers, the amount of rainfall in different regions, and the necessity of conserving and distributing this rainfall. They found the range of temperature in different sections, and accounted for this temperature by the study of latitude, the influence of elevation, the winds, and large bodies of water. They saw that India has no extremes in temperature except in some places there is intense heat at certain seasons. They saw that India has tropical, subtropical, and temperate temperatures.

With this work as a background for an apperceptive basis, the approach to the definite problem was then taken. The class was asked this question: How does climate influence the life of a people? After a little time for thinking, a pupil said that it determines how people dress; another, what the farms produce; another, what the people manufacture, the kind of schools they need, whether the people are lazy or industrious. This was thinking facts into proper relations.

They got the area of India and compared this to the area of the United States and of Brazil. They also compared the population of these countries and saw that India is densely populated. By looking at pictures and illustrations which show how people of India dress, how they farm, and the kind of houses they live in, they saw that the people of India are in many respects a backward people. They said that they wanted to read to find out how these people live and what can be done to improve their living conditions.

THE CLASS AT WORK

The class studied the physical features, the climate, methods of farming, means of travel, the caste system, and the religions of India. They used the reference material willingly in getting solutions to subordinate problems. They found the different agricultural products, each pupil took a subject and gave an oral report. They drew a large map on the board and put in at proper places the names of the products. The boys made a clay relief map, got samples of agricultural products and a few of the manufactured articles, and placed these in the proper place on the map.

They became acquainted with methods of farming and the farming tools and compared these to the United States. They gave individual reports on manufactured articles, telling about the methods and machinery used. Cities were studied in this connection. They were named, located, and the main factors in their development pointed out.

CORRELATION

During the study almost every subject was correlated with geography. One teacher made out a list of words for each day taken from the geography lesson. The class spelled the words and used each in a sentence pertaining to the geography of India. Another teacher prepared arithmetic problems each day using facts from the geography lesson.

Art work was correlated with geography in two ways. As stated above, the boys made a clay map placing upon it agricultural and manufactured products. They represented the irrigation system and the large reservoirs. They also constructed a miniature Indian house. The girls made paper Indian houses and used straw and grass for the thatched roofs.

Many opportunities were afforded for the correlation of geography and language. Oral and written reports were required on

several topics. After studying about missionaries, they wrote letters to Indian children attending mission schools.

A DRAMA

The study did not seem complete without a dramatization. The fifth grade class wrote the drama and improvised the costumes appropriate to the different characters. They represented different industries, the educational system, and the religious and social customs of the people of India.

Everyone was more than pleased with the results. The methods class was convinced that a project can be carried out successfully under ordinary conditions. The experiment also demonstrated the value of cooperation and team work.

EDITORIAL NOTES AND NEWS

According to a recent report of the U. S. Geological Survey the total capacity of water power plants in United States on January 1, 1930 was 13,807,000 horsepower, an increase of 1.7 per cent during 1929. This is the smallest increase for a number of years. However, it is to be noted that 800,000 horsepower is under construction and scheduled for completion in 1930. It is interesting to note that 24 per cent of the developed water-power in the United States is in the Pacific group of states; 19 per cent in the South Atlantic; 15 per cent in the Middle Atlantic; and 12 per cent in New England. The report also shows the trend of waterpower development in different places in the United States, and the change in rank of the important waterpower states since 1921.

Another report shows that the prevailing low rainfall thruout the country during 1929 resulted in a decrease of 1½ per cent in the electricity produced at public utility hydroelectric plants. This resulted in a heavy demand upon fuel-burning power plants. However, these plants were able to meet the emergency and such plants showed an increase of 18 per cent in electricity output over the preceding year. The increase in the consumption of coal, oil, and gas were 9, 41, and 46 per cent respectively. The great progress being made in the efficiency of fuel-burning electric plants has been noted in previous issues of the JOURNAL. Fuel consumption per unit of electricity produced continued to decrease during 1929. The saving amounted to .07 pound of coal per kilowatt-hour. At first sight this amount appears too small to be worthy of consideration. However, it amounted to a saving of 2,200,000 tons of coal during 1929, and represented a total saving of approximately $9,000,000. Its importance is shown in the fact that the increase in the production of electricity amounted to 18 per cent from 1928 to 1929 but the increase in fuel consumption was only 13 per cent.

Most readers will recall that a few years ago a prize was offered for the first plane to fly the English Channel. It is probable that few people realize the tremendous changes that have taken place since that time. Imperial Airways, which operates planes between London and Paris, have just completed 5,000,000 miles of cross-channel flying, representing approximately 20,000 flights and the carrying of more than 100,000 passengers.

The recent census of Chosen (Korea) shows a total population of 19,189,000. Of this number 18,600,000 were Koreans and 469,000 were Japanese. The Koreans are engaged chiefly in agriculture, forestry, and stock raising. This group comprises 82 per cent of the entire population. The Japanese comprise less than 2½ per cent of the total population and 31 per cent of this small group is engaged in commerce and traffic, and 34 per cent in official and professional business. Among the 53,300 people who are foreigners, most of whom are Chinese, 46 per cent were engaged in commerce and traffic, and 26 per cent in agriculture, forestry, and stock raising.

The total foreign trade of the United States in 1929 reached the huge figure of $9,600,000,000. The total exports were higher than in 1920. A striking feature was the increase in the exports of finished manufactures amounting to 12 per cent increase over the exports of 1928. Exports of cotton and grain were smaller but the decreases were partly offset by increase in value of exports of machinery, automotive products, and other finished articles. Our imports show a marked gain in the value of crude material, semi-manufactures, and finished articles. Measured by quantity, imports show a gain of about 15 per cent but due to lower prices the value increase was about 7½ per cent.

Canada again won the wheat championship of the world at the last International Live Stock Exhibition and Hay and Grain Show at Chicago. During the nineteen times this exhibition has been held, Canada has won the prize fifteen times. The other four times the prize went to Montana. This year's prize wheat was grown at Wolf Creek, 150 miles west of Edmonton. It is a new variety, maturing in 100 days. Evidently this northern region is most favorable for the propagation of high grade pedigreed seed.

Mexico's petroleum production in 1929 was less than one-fourth the output of 1921. Also, the chief area of production has shifted from the Tampico region to the Isthmus of Tehuantepec.

Two Norwegian navy planes have been assisting the fishing fleet to locate schools of fish. The planes detect the schools by the presence of sea gulls and whales which follow the schools. One realizes what a saving this is to the fleet inasmuch as the planes scout over thousands of miles of fishing grounds before locating the schools.

Visual instruction has been receiving considerable attention in Russia. Last year the total of educational films exceeded that of entertainment films. Many of these films are said to be a result of scientific expeditions to various parts of the country. The American distributor of these educational films is the Amkino Corporation, 723 Seventh Avenue, New York.

Following the publication of the article on The National Council of Geography Teachers appearing in the December, 1929, JOURNAL, active state councils have been formed in California and in North Dakota. Both are affiliated with the National Council and their respective state education associations. Perhaps you will wish to note this change on the map showing the distribution of active state councils in the December JOURNAL.

Sand bars at the mouth of the Magdalena River practically close it to sea-going vessels. Since the Magdalena carries most of the commerce of Colombia, this necessitates an overland haul of goods from the river to the sea. The bulk of this transfer is via rail between Barranquilla, about six miles upstream, and Puerto Colombia, a rather shallow sea port, tho attractive bathing beach, west of the mouth of the river. It seems almost incredible to us that no modern highway connects these ports. Barranquillans, whether seeking business or pleasure, have to spend the better part of a day on a train when commuting to this seaside port, 13 miles distant. Recently, however, the national government has authorized the construction of a modern highway between the two ports.

INTEREST-STIMULATING DEVICES

Flash-Cards

Make two sets of flash cards; one containing the names of the states; the other set the names of the capitals. When the state is flashed the pupil is to give the correct capital, or if the capital is flashed the state is named. This game is one in which the children find great pleasure.

VIVIENNE S. WORLEY
Rocky Ford, Colorado

We Need Asia

Let the children of the art class make a poster entitled, "We need Asia." On one side of the poster paint or paste a group of dolls dressed to represent the girls or boys of various Asiatic countries. On the opposite side of the poster paint a doll representing an American girl. Call this doll "We," and have her arms outstretched towards the other dolls. Each Asiatic doll should be flying a gayly colored balloon. As the children finish the study of each country, they print on the balloon of that country the chief products we obtain from it. Patterns for the dolls can usually be borrowed from the primary department. If desired, actual dolls can be used in place of the paper dolls. By correlating the work with the art class an attractive poster can be made. It is especially well adapted to the Junior High School.

ALMA C. LINDBERG
Wausa, Nebraska

Current Events

Secure a large world map, and label it a Pictomap. Encourage the students to bring in newspaper or magazine clippings of a current event which has geographic significance. Preferably, the clipping should be illustrated. Pin the clipping to that part of the map when the related event occurred. To avoid cluttering the map, attach the clipping to some framework or wall space. Attach a fine string to the clipping and anchor the other end of the string to its proper location on the map.

The author acknowledges the receipt of this idea from Letha Shewmaker, Supervisor of Geography, East Tennessee State Teachers College.

CHARLES EDGAR BRITTON
Junior High
Johnson City, Tennessee

GEOGRAPHICAL PUBLICATIONS

Harlan H. Barrows, Edith Putnam Parker, and Margaret Terrell Parker. **Geography of Southern Lands.** 296 pp. 264 photos, maps, and diagrams. Silver, Burdett & Co., Newark, N.J. 1929

This book completes the series of four—the others of which are Journeys in Distant Lands, the United States and Canada, and Europe and Asia. The plan of the series is modern in its conception of the one-cycle study of geography; it is scientific in its understanding of what geography includes; and it is teachable. Every chapter gives evidence of laboratory work with children, of a knowledge of their needs and interests as well as of the necessity for exercises and checks to test the effectiveness of the work being done.

"Southern Lands" maintains the high standard of the earlier books in its detailed study of important regions, in its suggested activities that foster study habits; and in the use of maps and pictures for interpreting geographical situations. It describes historical backgrounds only in so far as they effect the use of environment. It strives to create a sympathetic viewpoint of so-called backward nations by building up an understanding of the handicaps in their environmental conditions and history. For example, under the caption "Progress under Difficulties" it says in regard to Central America: "It should be remembered, in thinking of Central America (other than British Honduras), that it freed itself from Spain little more than a century ago. The Republic of Panama dates only from 1903, having been a part of Colombia after the Spanish yoke was thrown off. While Central America was part of the Spanish Empire, its trade was restricted greatly. Its people obtained little or no experience in self-government, since almost all officials were sent from Spain. Most of the better lands were divided among the relatively few white settlers, and large numbers of mestizos and native Indians were left landless, poor, and unschooled. Costa Rica, in which there were few natives who could be used as laborers, and in which most of the Spanish settlers consequently took only such tracts of land as they could cultivate themselves, is, in part, an exception to this rule. It is considered by many people to be the most advanced of the Central American states. The Central American republics, as you see, began their independence under serious handicaps. The rugged surface of their highlands and the tropical climate of their lowlands imposed further difficulties. In spite of all, progress is being made and doubtless will continue."

The reviewer agrees with the authors that the study of Southern Lands should be reserved for the later grades because they offer such good opportunities for the study of problems of interest to older children—the quest for raw materials, the exploration of undeveloped countries which resulted in the partition of Africa, the growth of foreign trade, the modern migrations of peoples—immigration—and the interdependence of all nations. The book is an excellent background for all the social studies.

It cannot be used to the best advantage unless the teacher understands the technique of supervised study. Children must be taught how to use the exercises given. It would be difficult to use the books in schools where but ten or fifteeen minutes a day are given to geography. But where children have commenced to acquire study habits, the book is a good teacher in itself.

There are minor points of criticism. The artificial manufacture of nitrate as it affects Chile is not mentioned; Cairo has grown because routes focus there but railroads are barely mentioned and the fact that it is an airplane station is not mentioned at

all. One wonders why Uruguay is studied with Brazil when in reality its life is so closely associated with that of Argentina. One wonders, too, how well children understand the exercises on latitude and longitude.

As a whole, the book is excellent in make up, method, scholarship and viewpoint.

State Normal College,
Ypsilanti, Mich. ELLA M. WILSON

Harold O. Rugg. **An Introduction to American Civilization.** 640 pages. Ginn and Company, 1929.

An Introduction to American Civilization is by the author called a "Reading Book" and is accompanied by a work book (77 pages) for the pupils, which is designed to direct their study in an approved manner. Accompanying these two books is a teacher's guide which outlines the psychological and experimental bases of the course as well as suggestions relative to the teaching of the nine units of work. The work outlined is for the first half of the seventh grade or the first half of the first year of the junior high school. It is avowedly a composite of geography, history, and civics which the author thinks has really been unified in a desirable way for a beginning course in the junior high school. The author, with the help of a number of assistants and research associates thru several years, has carried on extensive research, investigation, and experimentation in the selection and organization of the materials of the course. It was tried out in many schools in pamphlet form before the making of the book.

From the standpoint of educational procedure, organization of material, the application of interesting and approved devices, it seems that little has been left undone. In fact, one is convinced from a reading of the Teacher's Guide that the whole galaxy of principles of modern educational theory and practice has been religiously adhered to and incorporated in this and the companion books which are to follow.

The textual reading matter is interesting, dealing as it does with many problems that have been solved by the American people. The episodal method of treatment helps in gripping the attention of the reader and the work book with its well-planned outlines for pupils' activity is bound to win the hearty approval of superintendents, principals, and teachers.

The research method of curriculum making is heartily to be commended and no doubt much remains to be desired in bigger and better programs of this kind. It is just here, however, that great danger may befall us all, for even experts, whom we are inclined to follow all too blindly, may fall into error or overlook vital facts. To a trained geographer this appears all too evident in "An Introduction to American Civilization." The apparent neglect of the basic consideration of geographic interpretation in this work together with the multiplicity of errors in the matter of scientific geographic treatment marks the author as one who not only does not know his geography, but is not even aware of this fact, otherwise he would have consulted geographers of recognized standing in eliminating such deficiencies and errors as are illustrated by the following.

In Chapter III the author does not differentiate between *weather* and *climate.* For instance, on page 42 the question is raised concerning the *changing climate* of the temperate zone, while the context shows plainly that the author really has in mind the *changeable weather.* On the same page in explaining the moist windward slopes of mountain ranges, the writer shows himself not to be familiar with the adiabatic cooling of air. Again, on the same page the air in the Great Basin Region is said to gain in water vapor by drawing it up from the earth rather than by the method of evaporation. As a consequence, according to this explanation, this intermountain region of the United States is dry more perhaps because the winds draw up the moisture than because of

scanty rainfall. While the author does put in some time on his inaccurate attempt to explain the rainfall conditions west of the 100th meridian, no time or space is given to explaining how the rains, variable weather and seasonal changes come to the great agricultural interior and eastern sections of the country. The reviewer thinks these to be unforgivable errors and omissions as far as scientific treatment is concerned.

The Mercator map on page 16 is inserted for the purpose of comparing the area of the United States with that of the world as a whole and its parts. First of all a large, part of the earth is not shown on this map. Secondly, pupils are led to believe that the United States is about as large as South America, whereas it is less than half as large, and that Alaska is half as large as the United States while in fact it is one-fifth as large. On page 17 the dot map on Mercator's projection to show comparative populations likewise leaves erroneous impressions. The outline maps of the United States in the workbook have the Black Hills in Montana. The map of the world's production of petroleum on page 126 is far from being up-to-date.

The pictographs in Chapter II are very misleading, in fact woefully inaccurate. For instance, Figure 10 is meant to convey the idea that the United States produces about 80 per cent of the automobiles of the world. Now the pictographs are similar three dimension figures and, therefore, are to each other as the cubes of their corresponding dimensions. Since the large automobile is four and one-half times as long as the smaller, they in fact are to each other as 1^3 is to $4\frac{1}{2}^3$ or approximately 1 to 91. So while the data under the figure show that the United States produces about 80 per cent of the automobiles of the world, the pictograph indicates almost 99 per cent. Likewise the data for Fig. 7 show that the United States produced 71 per cent of the world's petroleum, while the pictograph indicates that it produces about 93 per cent. In other words, the pictograph in Fig. 10 would much more nearly represent the facts if the small automobile were three times as long as it is, and the truth would be more nearly approximated if the smaller derricks in Fig. 7 were twice as tall as they are.

These inaccurate comparisons are unfortunate. For is there not danger that the adolescent youth already has been forced into the attitude of over-emphasizing the superior position of our own country in world affairs? This again raises the whole question as to whether or not modern geography does not have much more worthwhile material to build into the lives of our junior high boys and girls than this abbreviation of several subjects which is not only inaccurate and unscientific in many places, but which is likely to build up vicious attitudes relative to our own superiority and corresponding prejudicial attitudes toward peoples who are not so fortunately situated as we.

If this semester of work on "An Introduction to American Civilization" contains most of the geography that the junior high youth is to get from the unified social science course, should not school administrators and curricula makers investigate again what modern geography has to offer for the well-rounded development of junior high boys and girls? In a country with such a multiplicity of divergent interests is not the geographic point of view entitled to more consideration?

E. E. LACKEY

University of Nebraska

L. H. Dudley Buxton. **China: The Land and the People; A Human Geography.** 333 pages, 63 maps and photos. Oxford, at the Clarendon Press, 1929.

The book is an accumulation of facts about China, some of which can be used by a geographer, but to label it a human geography is something of a misnomer. One searches in vain for evidences of a distinctively geographic organization, while certainly no fine

discrimination has been employed in the selection of subject matter for its geographic quality. The same criticism may be leveled at a number of the photographs and maps, many of the sketch maps being more decorative than useful.

Introductory chapter I, dealing with "The Land and the People," is a brief descriptive summary of the physical sub-divisions of the Chinese Empire. China proper is divided into three parts, the Northern Uplands, the Central Plain and the Southern Uplands. The suitability of the two latter names may be questioned. The reader is conscious of the lack of a well executed map showing the boundaries and principal features of the major and minor subdivisions. Chapter II deals with the natural history of China, both ancient and modern. The facts of paleontology here related are full of interest but of doubtful value to the geographer. The same comment applies to the discussion of theories dealing with the dispersion of present-day plant and animal life. Chapter III continues the natural history of China but here man is the object of study. The subject matter is essentially anthropology and ethnology. Chapters IV to VIII inclusive, dealing with the general subject of agriculture are disappointing for they contain so little that is new. Agricultural methods are described, and contrasts in crops and culture methods in various parts of the country are noted. The interpretative element is not emphasized. It is to be regretted that the figures showing crop and animal distribution, after the dot maps of La Fleur, Foscue, and Baker, were redrawn, using shading to indicate relative importance of the crop or animal industry. Chapter IX makes clear the undeveloped condition of communications in China. Mechanical transport is unimportant for the "roads" are normally only trails. Most of the 8,000 miles of railway are not in a condition to serve as means of communication. In Chapter X, "The Geographical Aspects of Chinese Culture," language, government, religion, family life and social institutions in general are analyzed, and, frequently given a geographical slant by relating social forms and practices to the environment in which they have prospered. Chapters XI to XIV inclusive, which are concerned with the natural environment of China, might well be shifted to an earlier position in the book if their contents are to function in an interpretative way. Valuable descriptive information, dealing with the physical features of the land, is contained in chapters XI and XII, altho too often the text reads like a guide-book in which place names occupy too prominent a position. Chapter XIII is a brief regional and structural geology of China. Mineral deposits are mentioned but neither here nor elswhere in the book is there an adequate treatment of the country's mineral resources. The last chapter, a topical and regional climatology of China, was written by W. G. Kendrew.

GLENN T. TREWARTHA

University of Wisconsin

Marion I. Newbigin. **A New Regional Geography of the World.** 432 pages, illustrated. Harcourt, Brace & Co., New York. $2.75.

The following quotations, selected from the introduction, will set forth the author's approach and concept of her task. (1) "A natural region, large or small, is thus an area with some unity of structure and relief, reflected in its climate and in the organic response to the sum total of the physical conditions. It displays in some or all of these respects a definite contrast to surrounding areas." (2) "Nature has certainly drawn limits, but civilized man is as yet but an intruder, too few in numbers, too recent an immigrant, to have been compelled to adjust himself accurately, to take full advantage of his opportunities. In such continents as South America and Australia in particular, where large tracts of virtually unsettled lands exist, a detailed division into natural regions seems unnecessary in an outline study such as this." (3) "Generally it may be

said that no rigid consistency of treatment thruout has been attempted. An effort has been made, within definite limits of space, to survey the world in such a fashion as to bring out the aims and methods of the modern geographer, to open windows rather than present facts.''

The first quotation seems to indicate an excellent point of view. The other quotations seem to be apologies for failure to adequately fulfill the expectations of the first.

If the division of a continent into countries be regional geography, then certain parts of this book qualify. If the division of certain countries into districts be regional geography, then other parts qualify. This lack of consistency is anticipated in the third quotation, but is not justified on the basis of modern regional geography of the world. Moreover, the second quotation is not a justification for leanness of geographic analysis where materials are not already organized. Europe is voluminously treated.

LEWIS F. THOMAS

Washington University, St. Louis, Missouri

Edward A. Duddy. **Agriculture in the Chicago Region.** 158 pages; 56 maps, 12 tables of statistics. University of Chicago Press, Chicago, 1929. $4.00.

In the introduction we are told that this ''study was undertaken as a part of a general program of community research being carried on by the local Community Research Council of the University of Chicago, acting in cooperation with the Chicago commonwealth clubs and the Chicago Regional Planning Association.''

The report is a statistical atlas, showing the distribution of the numerous items—percentage of area in farms, in crops, in pastures, in wheat, corn, hay acreage, etc.—that one usually associates with a study of agriculture as presented in the Year Books of the Department of Agriculture or the census atlases, except that in this study the township is taken as the unit rather than the county. Each map is accompanied by a brief description in which there is an attempt to correlate the items with the physical features of the region. These correlations rarely ever progress far enough to be considered as interpretations in a geographic sense. The maps (Part II, The Use of The Land) are preceded by a brief discussion of the physical conditions of the region, organized in the regular stereotyped fashion—physiographic division, soil, and climate. The area considered as the Chicago Region is approximately 7,800 square miles, lying roughly within a radius of 60 miles of the mouth of the Chicago River, and includes 3 counties in Wisconsin, 9 in Illinois, and 3 in Indiana. No explanation is given for limiting the region to 7,800 square miles. Why should the area be rectangular? Why not 78,000 square miles? Apparently in the regional planning surveys studied, the *region* does not have the same connotation as it does for a geographer. The only reason the reviewer can ascribe for delimiting the region as it is, is that it is a matter of expediency in mapping.

The maps, as a whole, are well done. The press work is up to the high standard set by the University of Chicago Press, and the binding is admirable.

Possibly the report will be of value, as is suggested, to ''the regional planner, the agricultural economist, and the directors of agricultural enterprise, the banker, the real estate man, and the large city merchant,'' but it makes next to no contribution to agricultural geography of the newer type. Indeed, to one acquainted with the techniques and the accomplishments of the present day field workers in agricultural geography this study is both juvenile and ancient. With the exception of a field excursion or two with a soil specialist in an attempt to correlate the soil types of the different soil surveys,

the work apparently was done, or certainly could well be done, in an office whose windows overlooked Midway Plaisance.

A. E. PARKINS

George Peabody College

C. R. Shaw. **Delinquency Areas.** A study of the geographic distribution of offenders in Chicago. 214 pages, 26 maps. University of Chicago Press, 1929.

One of the most significant facts about cities is that sharp local contrasts prevail in the types of people, socially, economically, and in ideals. This scholarly study reveals that the percentage of the population who are school truants, juvenile delinquents or adult offenders varies sharply within Chicago. Furthermore it varies geographically rather than racially or even by economic status. Sections near the center of the city have much crime, regardless of the race. In general, criminality decreases with increased distance from the zone surrounding the Loop. In some of the choicer residential sections and suburbs there is very little crime except such as is committed by persons who came from the less desirable sections of the city. Indeed there is clear evidence of the contaminating influence of offenders. Such contrasts in criminality as are here disclosed by scientific study have long been surmised. That is one reason why law-abiding people have moved away from the less desirable districts to form "select" districts. But this migration of course increases the average criminality of those who remain in the less desirable sections of the city!

This book will be of service to teachers of geography who are interested in urban geography, and its conclusions are significant to all who are concerned with the welfare of youth.

S. S. VISCHER

Indiana University

L. Dudley Stamp. **Asia.** 604 pages, illustrated. E. P. Dutton and Company, New York. 1929.

In his "Asia" L. Dudley Stamp has made a real contribution to geography. The book contains over 600 pages of interesting, well-written text profusely illustrated with excellent maps and diagrams. The first sixty pages treat the continent as a whole—its geology, climate, vegetation, population, early exploration and present economic position —while the rest of the book is given over to a veritable compendium of geographical information arranged by political units.

With each political division introduced, the historical background and political situation necessary to an understanding of the geography is clearly and interestingly portrayed. This is accompanied by an unusually fine discussion of the elements of the natural landscape, and, in most instances, a division into well defined natural regions. The cultural side of the picture, altho well done, is not treated in as great detail as the natural landscape. The kind of photographs which usually illustrate American textbooks are missed greatly and might have done much to strengthen the portrayal of cultural conditions.

Over one-third of the entire book is devoted to the section on India, the apex of the whole work. This is due, no doubt, to the writer's special interest and knowledge in this field as well as the great availability of statistics and geographic information for India. China and Japan together, however, have been treated in only half as much space, resulting in a slightly warped picture of the continent in the mind of the reader.

Aside from the book's undoubted value as a text, there is considerable literary merit

as well. The author has an apt phraseology which is pleasing as well as vivid. The title of the frontispiece, "Asia—the mountain hearted—unique among continents" is pithy, and connotes much that is geographic. Touching as it does on many phases of knowledge of Asia the book should have a wide appeal to others as well as geographers.

RAYMOND E. MURPHY

University of Wisconsin

E. E. Free and T. Hoke. **Weather.** Practical, dramatic and spectacular facts about a little studied subject. 337 pages, 60 photos, R. M. McBride and Co., New York, 1928. $3.00.

Dr. Free, a well trained and substantial scientist and a leading popularizer of science, and Mr. Hoke, have produced a noteworthy popular book on "Weather." It is so interestingly written that many high school boys read it for the fun of it, and three printings were required in five months. Yet scientifically it contains few errors and gives few wrong impressions. Many sections are splendid examples of effective popularization and scientific knowledge. The chapter on Weather Rhythms is a good illustration. The authors inquired from numerous people what they would like to know about the weather. and have discussed these topics in a delightfully breezy style. Most of the photograp clouds, storms, snowflakes, etc., etc., are the best of their kind available.

Clearly Free and Hoke's "Weather" will prove to be a worth while addition to a school library, and will be a useful tool for the teacher of geography.

S. S. VISCHER

Indiana University